

<b>Title:</b> Math Element Card		
<b>Grade:</b> 6		
<b>PA Core Standard:</b> CC.2.2.6.B Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.		
<b>PA Connector:</b>		Solve real world, single-step linear equations.
<b>Strand:</b> Algebraic Concepts		<b>Family:</b> Problem Solving and Using Variables
<b>Progress Indicator:</b> <i>M.PR.F.1d using symbolic equations to summarize how the quantity of something changes</i>		
<b>Big Idea(s):</b> Mathematical relationships can be represented as expressions, equations, and inequalities in mathematical situations.		
<b>Essential Question(s):</b> How can expressions, equations, and inequalities be used to quantify, solve, model and/or analyze mathematical situations?		
<b>Foundational Knowledge:</b> <ul style="list-style-type: none"> <li>Recognize the intended outcome of a word problem based on a linear equation</li> <li>Match a representation of an equation with a variable to a real world problem</li> <li>Set up an equation in which both sides are equal (adding or subtracting the same number/value from both sides of the equation)</li> </ul>		
<b>Key Vocabulary, Concepts and Symbols:</b> <ul style="list-style-type: none"> <li>Understands vocabulary and symbols: <math>+</math>, <math>-</math>, <math>\times</math>, <math>\div</math>, <math>=</math></li> <li>Understands concepts and vocabulary: <b>variable, solution, equation</b></li> </ul>		
<b>Suggested Instructional Strategies:</b> <ul style="list-style-type: none"> <li>Explicitly teach strategies for determining the operation required to solve a single-step real world problem.</li> <li>Task analysis <ul style="list-style-type: none"> <li>Read the story problem</li> <li>Identify what question is being asked (define “<math>x</math>”)</li> <li>Identify the facts and the operation (<math>+</math>, <math>-</math>, <math>\times</math>, <math>\div</math>) in the story to write an equation.</li> <li>Add or subtract the number/value from both sides of the equation.</li> <li>Solve the equation for “<math>x</math>”.</li> <li>Show the answer as “<math>x = \underline{\quad}</math>”</li> </ul> </li> <li>Adding and subtracting strategies</li> </ul>		
<b>Supports and Scaffolds:</b> <ul style="list-style-type: none"> <li>Pictures and manipulatives</li> <li>Template for solving an equation</li> <li>Number line</li> <li>Calculator</li> </ul>		